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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/368,572	08/05/1999	TOSHIHARU OHBA	OHBA=1A	5695

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EXAMINER

CHUNDURU, SURYAPRABHA

ART UNIT PAPER NUMBER

1637

DATE MAILED: 02/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/368,572

Applicant(s)

OHBA ET AL.

Examiner

Suryaprabha Chunduru

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. Applicants' response to the office action and amendment (Paper No. 15) filed on September 30, 2002 has been entered.
2. The Information Disclosure Statement (Paper No. 14) filed on July 3, 2002 has been entered and considered.

Response to Arguments

3. Applicant's response to the office action (Paper No.15) is fully considered and deemed not persuasive.
4. With respect to the rejection made in the previous office action under 35 U.S.C. 112, first paragraph, Applicant's arguments with respect to claims 3-6 are considered but are found not persuasive because of the following reasons:

Applicants argue that the specification provide stringent hybridization conditions as claimed in the instant claims which exclude less homologous nucleic acids and can determine the promoter activity of a DNA fragment obtained under said conditions using the procedure described in the instant specification (page 44, lines 9-50, line 16). Further Applicants' argue that a plant promoter can be obtained using a probe designed from SEQ ID Nos. 1-8, using stringent hybridization conditions as disclosed in the instant specification. Applicants' arguments are fully considered and found not persuasive because hybridizable fragments obtained under stringent conditions comprise a genus (hundreds of millions of different possibilities) of DNA fragments for which no structural limitation is recited. No information structural limitation regarding wherein the fragments the promoter activity resides, in order to be expressed and would control the morphology of a plant, is provided in the instant claims. Applicants also argue that they are

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in possession of the invention since all the limitations regarding stringent hybridization conditions to obtain hybridizable fragments are disclosed in the specification. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Further the structural limitation (sequence of promoter region) in said SEQ ID Nos. is not recited in the instant claims. Therefore the instant claims do not meet written description guidelines and hence the rejection is maintained herein.

5. With reference to the rejection maintained in the previous office action under 35 U.S.C. 102(b), applicants' arguments and amendment have been fully considered and the rejection is moot in view of the new grounds of rejection. Particularly because of Applicants' argument that Okazawa et al. discloses cDNA sequences and does not teach cDNA having promoter activity. In response to the argument MPEP 2112.01 notes that "products of identical chemical composition can not have mutually exclusive properties". A chemical composition and its properties are inseparable. Hence the hybridizable fragments as disclosed by Okazawa et al. inherently possess the promoter activity, since the disclosed nucleic acid sequence of Okazawa et al. and the instant SEQ ID Nos. 1 and 2 have identical homology.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okazawa et al. (J Biol Chem., Vol. 268(34): 25364-25368) in view of Kasukabe et al. (USPN. 6,225,536).

Okazawa et al. teach screening of cloned plant cDNA of endoxyloglucan transferase, wherein Okazawa et al. disclose sequences hybridizable to the instant SEQ ID Nos. 1 and 2, under conditions of hybridization at 65⁰ C in a solution containing 6 x SSC, 0.1% SDS, 0.1 mg/ml salmon sperm DNA and 5% denhardt's solution (see sequence alignment from Gencore version 4.5, and page 25365, column 1, paragraph 3, column 2, Fig 1). The instant claims recite nucleotide sequence hybridizable to SEQ ID Nos. 1 and 2 and the calculated T_m for the sequence disclosed by Okazawa et al. is 75⁰ C (see attached oligonucleotide T_m calculations). Thus any nucleotide fragment comprising said sequence hybridizes at 65⁰ C under said hybridization conditions. However, Okazawa et al. did not teach transforming a plant or plant cell to control the morphology of said plant.

Kasukabe et al. teach a method for transforming a plant with a novel gene to control the morphology of said plant or plant cells (see column 3, lines 34-40, column 8, lines 17-56).

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Therefore, it would have been prima facie obvious to a person of ordinary skill in the art at the time the invention was made, to modify a method of screening endoxyloglucan transferase sequences in plants as taught by Okazawa et al. with a method of improving morphology of a plant as taught by Kasukabe et al. to achieve expected advantage of developing a method for controlling morphology of a plant because Kasukabe et al. states that “gene recombination techniques provide variety of improvements in plants by introduction and expression of a particular gene in these plants to confer a desired genetic trait” (see column 2, lines 51-61). An ordinary practitioner would have been motivated to combine the method of Okazawa et al. with the method of Kasukabe et al. in order to achieve the expected advantage of developing a sensitive method for controlling plant morphology by incorporating the limitation (transforming a plant or plant cell), which would improve the morphology of a plant with desired characteristics.

Conclusion

No Claims are allowable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suryaprabha Chunduru whose telephone number is 703-305-1004. The examiner can normally be reached on 8.30A.M. - 4.30P.M, Mon - Friday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on 703-308-1119. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-0294 for regular communications and - for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.


Suryaprabha Chunduru
February 14, 2003


JEFFREY FREDMAN
PRIMARILY RESPONSIBLE